This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Amended) A moving bed adsorber apparatus comprising:

a housing having a fluid inlet, a fluid outlet, an adsorbent inlet and an adsorbent outlet;

a plurality of spaced-apart, downwardly sloped vane members having edges, said vane members being positioned within the housing such that contaminated fluid that enters through the fluid inlet will subsequently flow through spaces between said vane members; and,

an adsorbent depth regulator positioned a spaced distance from the edges of the vane members and defining an adsorbent flow channel there between, at least a portion of said adsorbent depth regulator being porous to fluid flow;

such that, a flow of adsorbent may pass through the adsorbent inlet, through the adsorbent flow channel, then out of the adsorbent outlet and, concurrently, a flow of contaminated fluid may pass through the fluid inlet, through spaces between the vane members and through adsorbent moving through the adsorbent flow channel, thereby causing contaminant to be adsorbed on to the adsorbent, and a remaining fluid from which the contaminant has been removed then flowing through the adsorbent depth regulator and out of the fluid outlet;

wherein the vane members are spaced approximately 5-25 mm apart.

2. (Cancelled)

3. (Original) A moving bed adsorber apparatus according to claim 1 wherein the spaces between the vane members are large enough to permit adsorbent to pass there through but the downward slope of the vane members is sufficient to prevent any substantial amount of adsorbent from entering the spaces between the vane members.

4. (Original) A moving bed adsorber apparatus according to claim 1 wherein the vane members are sloped downwardly at angles of approximately 10-45 degrees.

5. (Original) A moving bed adsorber apparatus according to claim 4 wherein the vane members are sloped downwardly at angles of approximately 15–30 degrees.

6. (Previously Amended) A moving bed adsorber apparatus according to claim 1 wherein the vane members and the adsorbent depth regulator are configured and positioned so as to define at least two adsorbent flow channels.

7. (Previously Amended) A moving bed adsorber apparatus according to claim 6 wherein said at least two adsorbent flow channels are configured and positioned to generally form a "V."

8. (Currently Amended) A moving bed adsorber apparatus according to claim 7 wherein said at least two adsorbent flow channels are configured and positioned to generally form a substantially inverted [[~~"V."~~]] "V."

9. (Previously Amended) A moving bed adsorber apparatus according to claim 7 wherein said at least two adsorbent flow channels are configured and positioned to generally form a substantially non-inverted "V".

10. (Previously Amended) A moving bed adsorber apparatus according to claim 7 wherein the angle between said at least two adsorbent flow channels generally forming the "V" shape is approximately 20–90 degrees.

11. (Previously Amended) A moving bed adsorber apparatus according to claim 7 wherein the angle between said at least two adsorbent flow channels generally forming the "V" shape is approximately 20–60 degrees.

12. (Previously Amended) A moving bed adsorber apparatus according to claim 6 further

comprising an adsorbent flow splitter for dividing the incoming flow of adsorbent such that adsorbent will flow through each of said adsorbent flow channel.

13. (Original) A moving bed adsorber apparatus according to claim 1 wherein the adsorbent depth regulator comprises a screen.

14. (Original) A moving bed adsorber apparatus according to claim 1 wherein the adsorbent depth regulator comprises a series of spaced-apart baffles.

15. (Original) A moving bed adsorber apparatus according to claim 1 further in combination with a quantity of adsorbent that is passable through the adsorbent flow channel, wherein the adsorbent depth regulator is constructed such that fluid that has passed through the adsorbent may pass through the adsorbent depth regulator but substantial amounts of adsorbent will not pass through the adsorbent depth regulator.

16. (Original) A moving bed adsorber apparatus according to claim 1 wherein the adsorbent flow channel has a substantially uniform width.

17. (Original) A moving bed adsorber apparatus according to claim 1 wherein adsorbent flows through the adsorbent flow channel substantially at plug flow.

18. (Previously Amended) A moving bed desorber apparatus comprising:

a housing having a recovery fluid inlet, a recovery fluid outlet, an adsorbent inlet, and an adsorbent outlet;

a plurality of spaced-apart, downwardly sloped vane members having edges, said vane members being positioned within the housing such that recovery fluid that enters through the fluid inlet will subsequently flow through spaces between said vane members; and,

an adsorbent depth regulator positioned a spaced distance from the edges of the vane members and defining an adsorbent flow channel there between, at least a portion of said adsorbent depth regulator being porous to fluid flow;

such that, a flow of adsorbent may pass through the contaminated adsorbent inlet, through

the adsorbent flow channel and out of the clean adsorbent outlet and, concurrently, a flow of recovery fluid may pass through the fluid inlet, through spaces between the vane members and through contaminated adsorbent as it moves through the adsorbent flow channel, thereby causing contaminant to be desorbed from the adsorbent and carried by the recovery fluid out of the recovery fluid outlet;

wherein the vane members are spaced approximately 5-25 mm apart.

19. (Cancelled)

20. (Original) A moving bed desorber apparatus according to claim 18 wherein the spaces between the vane members are large enough to permit adsorbent to pass therethrough but the downward slope of the vane members is sufficient to prevent any substantial amount of adsorbent from entering the spaces between the vane members.

21. (Original) A moving bed desorber apparatus according to claim 18 wherein the vane members are sloped downwardly at angles of approximately 10-45 degrees.

22. (Original) A moving bed desorber apparatus according to Claim 18 wherein the vane members are sloped downwardly at angles of approximately 15–30 degrees.

23. (Previously Amended) A moving bed desorber apparatus according to claim 18 wherein the vane members and the adsorbent depth regulator are configured and positioned so as to define at least two adsorbent flow channels.

24. (Previously Amended) A moving bed desorber apparatus according to claim 23 wherein said at least two adsorbent flow channels are configured and positioned to generally form a "V."

25. (Previously Amended) A moving bed desorber apparatus according to claim 24 wherein said at least two adsorbent flow channels are configured and positioned to generally form a substantially inverted "V."

26. (Previously Amended) A moving bed desorber apparatus according to claim 24 wherein said at least two adsorbent flow channels are configured and positioned to generally form a substantially non-inverted "V".

27. (Previously Amended) A moving bed desorber apparatus according to claim 24 wherein the angle between said at least two adsorbent flow channels generally forming the "V" shape is approximately 20–90 degrees.

28. (Previously Amended) A moving bed desorber apparatus according to claim 24 wherein the angle between said at least two adsorbent flow channels generally forming the "V" shape is approximately 20–45 degrees.

29. (Original) A moving bed desorber apparatus according to claim 23 further comprising an adsorbent flow splitter for dividing the incoming flow of adsorbent such that adsorbent will flow through each adsorbent flow channel.

30. (Original) A moving bed desorber apparatus according to claim 18 wherein the adsorbent depth regulator comprises a screen.

31. (Original) A moving bed desorber apparatus according to claim 18 wherein the adsorbent depth regulator comprises a series of spaced apart baffles.

32. (Original) A moving bed desorber apparatus according to claim 18 further in combination with a quantity of adsorbent that is passable through the adsorbent flow channel, wherein the adsorbent depth regulator is constructed such that fluid that has passed through the adsorbent may pass through the adsorbent depth regulator but substantial amounts of the adsorbent will not pass through the adsorbent depth regulator.

33. (Original) A moving bed desorber apparatus according to claim 18 wherein the adsorbent flow channel has a substantially uniform width.

34. (Original) A moving bed desorber apparatus according to claim 18 wherein adsorbent

flows through the adsorbent flow channel substantially at plug flow.

35. (Original) A desorber apparatus comprising:

a shell having an interior chamber there within, a heated fluid inlet and a heated fluid outlet;

a plurality of tubes having outer surfaces, said tubes being disposed within the interior chamber of the shell such that adsorbent may flow through said tubes while heated fluid contacts the outer surfaces of the tubes, thereby heating the adsorbent as it passes through the tubes and causing desorption of contaminant from the adsorbent; and

a recovered substance outlet through which the desorbed contaminant may pass out of the tubes;

wherein the shell and tubes are positioned at an angle of between about 30 degrees and about 60 degrees from a horizontal, during use of the apparatus.

36. (Original) A desorber apparatus according to claim 35 further comprising a vacuum source applied to the tubes to enhance desorption of contaminant from the adsorbent flowing through the tubes.

37. (Original) A desorber apparatus according to claim 35 wherein the apparatus is adapted for operation in a batch mode.

38. (Original) A desorber apparatus according to claim 35 wherein the apparatus is adapted for operation in a continuous mode.

39. (Currently Amended) A method for removing an adsorbable substance from a fluid stream, said method comprising the steps of:

(A) providing a moving bed adsorber apparatus that comprises i) a housing, and ii) at least one adsorbent flow channel located adjacent to a plurality of spaced-apart, downwardly sloped vane members, said vane members having edges, said vane members being positioned within the housing such that fluid may flow through spaces between said vane members and through adsorbent material that is flowing through said adsorbent flow channel;

(B) causing adsorbent to flow through said at least one adsorbent flow channel; and,

(C) causing a fluid stream containing the adsorbable substance to flow through spaces between the vane members and through adsorbent material flowing through ~~trough~~ the at least one adsorbent flow channel such that at least some of the adsorbable substance is adsorbed by the adsorbent material;

(D) desorbing the adsorbable substance from the adsorbent material by a process selected from ~~th egroup~~ the consisting of; i) a batch desorption process and ii) a substantially continuous desorption process.

40. (Previously Amended) A method according to claim 39 wherein the apparatus provided in Step A further comprises an adsorbent depth regulator positioned a spaced distance from the edges of the vane members, such that said at least one adsorbent flow channel is defined between the edges of the vane members and the adsorbent depth regulator, wherein at least a portion of said adsorbent depth regulator is porous to fluid flow; and

wherein Step C comprises causing a fluid stream containing the adsorbable substance to flow through the spaces between the vane members and through adsorbent flowing trough the at least one adsorbent flow channel between edges of the vane members and the adsorbent depth regulator such that at least some of the adsorbable substance is adsorbed by the adsorbent material and a substantial amount of the fluid from which the adsorbable substance has been removed then passes through the adsorbent depth regulator.

41. (Original) A method according to claim 39 wherein the adsorbent material comprises particles of adsorbent resin.

42. (Original) A method according to claim 39 wherein the adsorbable substance comprises a volatile organic compound.

43. (Original) A method according to claim 42 wherein the volatile organic compound comprises hexane.

44. (Original) A method according to claim 39 wherein the adsorbable substance comprises

water.

45. (Cancelled)

46. (Cancelled)

47. (Cancelled)

48. (Previously Amended) A method according to claim 39 wherein the adsorbable substance becomes a gas or vapor when heated and wherein Step D comprises heating the adsorbent material to cause the adsorbable material to vaporize or become gaseous.

49. (Previously Amended) A method according to claim 39 further comprising the step of: (E) recovering the adsorbable substance after it has been desorbed from the adsorbent material.

50. (Previously Amended) A method according to claim 39 wherein Step D is carried out using a shell and tube type desorber.

51. (Currently Amended) A method according to claim 39 wherein at least a partial ~~vaccuum~~ vacuum is applied to the adsorbent material during at least a portion of the desorption process.

52. (Original) A method according to claim 50 further comprising the step of positioning at least some of the tubes of the desorber on angle(s) of about 30 degrees to about 60 degrees from horizontal.

53. (Previously Amended) A method according to claim 39 wherein Step D is carried out using a moving bed desorber which comprises i) a housing and ii) at least one adsorbent flow channel located adjacent to a plurality of spaced-apart, downwardly sloped vane members, said vane members having edges, said vane members being positioned within the housing such that a recovery fluid may flow through spaces between said vane

members and through adsorbent material that is flowing through said adsorbent flow channel whereon said adsorbable substance has been adsorbed, said recovery fluid being effective to desorb at least some of the adsorbable substance from the adsorbent material passing through said adsorbent flow channel.

54. (Previously Presented) A moving bed adsorber apparatus comprising:

a housing having a fluid inlet, a fluid outlet, an adsorbent inlet and an adsorbent outlet;

a plurality of spaced-apart, downwardly sloped vane members having edges, said vane members being positioned within the housing such that contaminated fluid that enters through the fluid inlet will subsequently flow through spaces between said vane members; and,

an adsorbent depth regulator positioned a spaced distance from the edges of the vane members, the vane members and the adsorbent depth regulator being configured and positioned so as to define at least two adsorbent flow channels there between, at least a portion of said adsorbent depth regulator being porous to fluid flow;

such that, a flow of adsorbent may pass through the adsorbent inlet, through the adsorbent flow channels, then out of the adsorbent outlet and, concurrently, a flow of contaminated fluid may pass through the fluid inlet, through spaces between the vane members and through adsorbent moving through the adsorbent flow channels, thereby causing contaminant to be adsorbed on to the adsorbent, and a remaining fluid from which the contaminant has been removed then flowing through the adsorbent depth regulator and out of the fluid outlet.

55. (Previously Presented) A moving bed adsorber apparatus according to claim 54 wherein the vane members are spaced approximately 5-25 mm apart.

56. (Previously Presented) A moving bed adsorber apparatus according to claim 54 wherein the spaces between the vane members are large enough to permit adsorbent to pass there through but the downward slope of the vane members is sufficient to prevent any substantial amount of adsorbent from entering the spaces between the vane members.

57. (Previously Presented) A moving bed adsorber apparatus according to claim 54 wherein the vane members are sloped downwardly at angles of approximately 10-45 degrees.

58. (Previously Presented) A moving bed adsorber apparatus according to claim 57 wherein the vane members are sloped downwardly at angles of approximately 15–30 degrees.

59. (Previously Presented) A moving bed adsorber apparatus according to claim 54 wherein said at least two adsorbent flow channels are configured and positioned to generally form a "V."

60. (Previously Presented) A moving bed adsorber apparatus according to claim 59 wherein said at least two adsorbent flow channels are configured and positioned to generally form a substantially inverted "V.

61. (Previously Presented) A moving bed adsorber apparatus according to claim 59 wherein said at least two adsorbent flow channels are configured and positioned to generally form a substantially non-inverted "V".

62. (Previously Presented) A moving bed adsorber apparatus according to claim 59 wherein the angle between said at least two adsorbent flow channels generally forming the "V" shape is approximately 20–90 degrees.

63. (Previously Presented) A moving bed adsorber apparatus according to claim 59 wherein the angle between said at least two adsorbent flow channels generally forming the "V" shape is approximately 20–60 degrees.

64. (Previously Presented) A moving bed adsorber apparatus according to claim 54 further comprising an adsorbent flow splitter for dividing the incoming flow of adsorbent such that adsorbent will flow through each adsorbent flow channel.

65. (Previously Presented) A moving bed adsorber apparatus according to claim 54 wherein the adsorbent depth regulator comprises a screen.

66. (Previously Presented) A moving bed adsorber apparatus according to claim 54 wherein the adsorbent depth regulator comprises a series of spaced-apart baffles.

67. (Previously Presented) A moving bed adsorber apparatus according to claim 54 further in combination with a quantity of adsorbent that is passable through said at least two adsorbent flow channels, wherein the adsorbent depth regulator is constructed such that fluid that has passed through the adsorbent may pass through the adsorbent depth regulator but substantial amounts of adsorbent will not pass through the adsorbent depth regulator.

68. (Previously Presented) A moving bed adsorber apparatus according to claim 54 wherein said at least two adsorbent flow channels have substantially uniform widths.

69. (Previously Presented) A moving bed adsorber apparatus according to claim 54 wherein adsorbent flows through said at least two adsorbent flow channels substantially at plug flow.

70. (Previously Presented) A moving bed desorber apparatus comprising:

a housing having a recovery fluid inlet, a recovery fluid outlet, an adsorbent inlet, and an adsorbent outlet;

a plurality of spaced-apart, downwardly sloped vane members having edges, said vane members being positioned within the housing such that recovery fluid that enters through the fluid inlet will subsequently flow through spaces between said vane members; and,

an adsorbent depth regulator positioned a spaced distance from the edges of the vane members, said vane members and said adsorbent depth regulator being configured so as to define at least two adsorbent flow channels therebetween, at least a portion of said adsorbent depth regulator being porous to fluid flow;

such that, a flow of adsorbent may pass through the contaminated adsorbent inlet,

through the adsorbent flow channels and out of the clean adsorbent outlet and, concurrently, a flow of recovery fluid may pass through the fluid inlet, through spaces between the vane members and through contaminated adsorbent as it moves through the adsorbent flow channels, thereby causing contaminant to be desorbed from the adsorbent and carried by the recovery fluid out of the recovery fluid outlet.

71. (Previously Presented) A moving bed desorber apparatus according to claim 70 wherein the vane members are spaced approximately 5-25 mm apart.

72. (Previously Presented) A moving bed desorber apparatus according to claim 70 wherein the spaces between the vane members are large enough to permit adsorbent to pass therethrough but the downward slope of the vane members is sufficient to prevent any substantial amount of adsorbent from entering the spaces between the vane members.

73. (Previously Presented) A moving bed desorber apparatus according to claim 70 wherein the vane members are sloped downwardly at angles of approximately 10-45 degrees.

74. (Previously Presented) A moving bed desorber apparatus according to Claim 70 wherein the vane members are sloped downwardly at angles of approximately 15–30 degrees.

75. (Previously Presented) A moving bed desorber apparatus according to claim 70 wherein said at least two adsorbent flow channels are configured and positioned to generally form a "V."

76. (Previously Presented) A moving bed desorber apparatus according to claim 70 wherein said at least two adsorbent flow channels are configured and positioned to generally form a substantially inverted "V."

77. (Previously Presented) A moving bed desorber apparatus according to claim 70 wherein said at least two adsorbent flow channels are configured and positioned to

generally form a substantially non-inverted "V".

78. (Previously Presented) A moving bed desorber apparatus according to claim 75 wherein the angle between said at least two adsorbent flow channels generally forming the "V" shape is approximately 20–90 degrees.

79. (Previously Presented) A moving bed desorber apparatus according to claim 75 wherein the angle between said at least two adsorbent flow channels generally forming the "V" shape is approximately 20–45 degrees.

80. (Previously Presented) A moving bed desorber apparatus according to claim 70 further comprising an adsorbent flow splitter for dividing the incoming flow of adsorbent such that adsorbent will flow through each adsorbent flow channel.

81. (Previously Presented) A moving bed desorber apparatus according to claim 70 wherein the adsorbent depth regulator comprises a screen.

82. (Previously Presented) A moving bed desorber apparatus according to claim 70 wherein the adsorbent depth regulator comprises a series of spaced apart baffles.

83. (Previously Presented) A moving bed desorber apparatus according to claim 70 further in combination with a quantity of adsorbent that is passable through the adsorbent flow channel, wherein the adsorbent depth regulator is constructed such that fluid that has passed through the adsorbent may pass through the adsorbent depth regulator but substantial amounts of the adsorbent will not pass through the adsorbent depth regulator.

84. (Previously Presented) A moving bed desorber apparatus according to claim 70 wherein the adsorbent flow channel has a substantially uniform width.

85. (Previously Presented) A moving bed desorber apparatus according to claim 70 wherein adsorbent flows through said at least two adsorbent flow channels substantially at plug flow.